

# Comparisons of Job Characteristics

**Focus Occupation:** [Engineering Technicians, Except Drafters, All Other \(17-3029\)](#)

**Associated Occupation:** [Engineers, All Other \(17-2199\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 97

**Focus Occupation:** Engineering Technicians, Except Drafters, All Other (17-3029)

**Associated Occupation:** Engineers, All Other (17-2199)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	20.1	17.6	<	Expanded education and/or training may be required
Mathematics	9.2	17.1	16.6	0	Current knowledge level may be sufficient
Design	5.2	16.5	15.1	0	Current knowledge level may be sufficient
Computers and Electronics	8.4	15.0	16.2	0	Current knowledge level may be sufficient
Physics	4.3	14.8	12.9	<	Expanded education and/or training may be required
Mechanical	6.8	14.0	16.6	>	Current knowledge level is likely sufficient
Production and Processing	6.0	12.9	13.3	0	Current knowledge level may be sufficient
Building and Construction	4.0	6.6	4.5	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 64

**Focus Occupation:** Engineering Technicians, Except Drafters, All Other (17-3029)

**Associated Occupation:** Engineers, All Other (17-2199)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	6.2	12.8	10.8	<	A higher skill level may be required
Systems Analysis	6.5	11.7	9.5	<	A higher skill level may be required
Science	4.5	11.4	7.7	<<	Extensive development of skills in this area may be required
Systems Evaluation	6.4	11.1	8.5	<<	Extensive development of skills in this area may be required

Operations Analysis	5.0	10.8	7.2	<<	Extensive development of skills in this area may be required
Technology Design	2.6	7.9	7.0	<	A higher skill level may be required
Equipment Selection	3.3	6.3	9.4	>>	Skill level is likely more than sufficient
Programming	2.2	5.3	4.9	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Abilities

Similarity of Focus Occupation to Associated Occupation: 95

**Focus Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)**

**Associated Occupation: Engineers, All Other (17-2199)**

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	15.1	12.7	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	15.0	12.9	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	13.7	12.0	<	Some improvement in abilities may be required
Mathematical Reasoning	6.3	13.4	11.2	<	Some improvement in abilities may be required
Information Ordering	9.9	13.2	12.0	0	Current ability level may be sufficient
Category Flexibility	9.0	12.3	11.0	<	Some improvement in abilities may be required
Originality	7.6	11.8	9.2	<	Some improvement in abilities may be required
Visualization	7.5	11.7	12.3	0	Current ability level may be sufficient
Number Facility	6.3	11.6	10.2	<	Some improvement in abilities may be required
Fluency of Ideas	7.6	11.4	9.8	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

There are no common work activities.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 85

**Focus Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)**

**Associated Occupation: Engineers, All Other (17-2199)**

Tools and Technologies	Exclusivity
Autoclave and sterilizer equipment and accessories	12
Business function specific software	1
Calculating machines and accessories	3
Chemical evaluation instruments and supplies	10

Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Content management software	6
Crystallography equipment	23
Cutting and crimping and punching tools	3
Data management and query software	1
Development software	4
Electrical measuring and testing equipment	7
Electrochemical measuring instruments and accessories	9
Electronic and communication measuring and testing instruments	14
Electronic manufacturing and processing machinery	56
Finance accounting and enterprise resource planning ERP software	2
Fluid mechanics equipment	11
Gas analyzers and monitors	10
Grinding and sanding and polishing equipment and supplies	40
Hydraulic presses	25
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Integrated circuits	18
Laboratory baths	24
Laboratory centrifuges and accessories	13
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Laboratory electron and solid state physics equipment	29
Laboratory enclosures and accessories	17
Laboratory environmental conditioning equipment	24
Laboratory furnaces and accessories	26
Laboratory heating and drying equipment	13
Laboratory incubating equipment	20
Laboratory ovens and accessories	15
Length and thickness and distance measuring instruments	2
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Liquid and solid and elemental analyzers	19
Machine tools	7
Machinery for working wood and stone and ceramic and the like	12
Mechanical instruments	14
Metals and metallurgy and structural materials testing instruments	15
Miscellaneous optical components	51
Network applications software	1
Networking software	21
Non destructive examination equipment	13
Operating environment software	12
Power conditioning equipment	33
Power tools	2
Presterilization cleaning equipment and solutions	24

Rubber and plastic processing machinery and equipment and supplies	35
Soldering and brazing and welding machinery and supplies	6
Sound generating and measuring equipment	19
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Transducers	23
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.